



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,738	06/29/2001	Robert C. Sundahl	10559-438001 / P10655	8185

20985 7590 04/11/2003

FISH & RICHARDSON, PC
4350 LA JOLLA VILLAGE DRIVE
SUITE 500
SAN DIEGO, CA 92122

EXAMINER

HARPER, HOLLY R

ART UNIT	PAPER NUMBER
----------	--------------

2879

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/897,738

Applicant(s)

SUNDAHL, ROBERT C.

Examiner

Holly R. Harper

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 23-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-22, drawn to a device, classified in class 313, subclass 504.
 - II. Claims 23-29, drawn to a method of manufacturing, classified in class 445, subclass 24.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case numerous substances, such as wire, thermal paste, or electrodes, could be used other than solder joints to create a path of low thermal resistance from the OLED pixels to the back of the panel.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Stephen Schaefer on 3/25/03 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-22. Affirmation of this election must be made by applicant in replying to this Office action. Claims 23-29 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-15, 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Roach et al (USPN 6,274,978 B1) hereinafter "Roach".

In regard to claims 1, 3, 4, 8, 9, 17, and 19, the Roach reference discloses an OLED display (Column 3, Lines 50-51) with a back panel (Figure 3, Element 210), front panel (Figure 3, Element 110), an array of OLED pixels divided into three OLED sub-sets (Column 3, Lines 15-20), and a plurality of thermally conductive elements, such as solder, between the pixel sub-sets and the back panel (Column 4, Line 4). There is at least one solder joint between each pixel subset and the back panel (Figure 3).

The recitation "the thermally conductive elements provide a path of low thermal resistance from the OLED pixels to the back panel" has not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

In regard to claims 2 and 19, the Roach reference discloses that each OLED pixel has a plurality of OLED sub-pixel regions that emit different colors of light (Column 3, Lines 41-46).

In regard to claims 5 and 10, the Roach reference discloses that each OLED pixel has at least one cathode contact and a solder joint for each pixel on the cathode contact (Figure 3, Element 140).

In regard to claims 6 and 11, the Roach reference discloses that each OLED pixel has at least one anode contact and a solder joint, conductive bump, for each pixel on the anode contact (Figure 3, Element 230).

In regard to claims 7 and 12, the Roach reference discloses conductive bumps between the pixels and the back panel (Column 4, Line 4).

In regard to claims 13 and 18, the Roach reference discloses that the back panel is made of a ceramic material (Column 6, Lines 40-44).

In regard to claim 14, the Roach reference discloses an epoxy material over coating the light emitting elements (Figure 3, Element 150 and Column 8, Lines 36-44).

In regard to claims 15 and 21, the Roach reference discloses that the back substrate is made of a ceramic material on top of a metal base sheet (Column 6, Lines 40-48), which serves as a heat fin.

In regard to claim 20, the Roach reference discloses solder joints, conductive bumps, connected to the anode (interconnect) and the back panel (Figure 3).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2879

7. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roach (USPN 6,274,978 B1) in view of Patel (USPN 5,396,403).

In regard to claims 16 and 22, the Roach reference discloses an OLED display with a heat sink but does not specify the use of a cooling fan. The Patel reference teaches that cooling fan can be attached to a heat sink of an integrated circuit on a substrate. The cooling fan increases the rate of convective heat transfer (Column 5, Lines 10-12). Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate a cooling fan on the heat sink, as taught by Patel, to increase the rate of convective heat transfer.

Contact Information

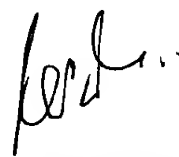
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Harper whose telephone number is (703) 305-7908. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Holly Harper
Patent Examiner
Art Unit 2879



NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800